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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/800,905	03/08/2001	Katsuyuki Suzuki	NEG-199 US	5530
21254	7590	09/21/2004	EXAMINER	
MCGINN & GIBB, PLLC 8321 OLD COURTHOUSE ROAD SUITE 200 VIENNA, VA 22182-3817			HO, CHUONG T	
			ART UNIT	PAPER NUMBER
			2664	

DATE MAILED: 09/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/800,905	SUZUKI, KATSUYUKI	
	Examiner	Art Unit	
	Chuong Ho	2664	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 1-3,5-8,10-12 and 14-17 is/are allowed.
- 6) ☒ Claim(s) 4,9 and 13 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4, 5</u> . | 6) <input type="checkbox"/> Other: ____ |

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1. Claims 1-17 are pending.

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claim 4 is rejected under 35 U.S.C. 102(e) as being anticipated by Okazawa et al. (U.S. Patent No. 6,035,414).

In the claim 4, see figure 3, Okazawa et al. discloses a construction shown at (1) in the normal operating mode. Among five switching LSIs 31 to 35, four switching LSIs 31 to 34 (active cross-bar switches) take charge of every two bytes of the address data transfer path of eight bytes, respectively, and the switching LSI 35 (redundant cross-bar switch) is a back-up LSI (see col. 5, lines 1-3);

See figure 3, in a system having cross-bar switches (LSIs 31-37) for connecting CPUs and a memory within a computer system or for connecting nodes in a computer system composed of a plurality of nodes, a cross-bar switch system with redundancy (LSI 35) comprising:

N+1 cross-bar switches inclusive of N (N=4) cross-bar switches that are indispensable for the system and one redundant cross-bar switch (LSI 35) (see figure 3, col. 5, lines 1-3);

See figure 4B, selection circuit 43 provided at inputs and output of cross-bar switches (LSIs 31-37) (see col. 5, lines 58-67, col. 6, lines 1-10, figure 8);

Operable when the system fails, for performing control in such a manner that a cross-bar switch (LSI 33) has failed is take out of service and the redundant

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cross-bar switch (LSI 35) is placed in service by controlling said selection circuit (43) by a failure processing circuit (the internal logic circuit 42 monitor the operation in an interlocking relation with the switching LSIs 31 to 37) after the system is restarted (see col. 2, lines 4-11, the operation as a crossbar switch is continued or restarted, and part exchange of the fault LSI can be performed), said failure processing circuit (42) recognizing that cross-bar switch has failed (see col. 5, lines 58-67, col. 6, lines 1-10).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 9, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okazawa et al. (U.S. Patent No. 6,035,414) in view of Kusano (U.S. Patent No. 5,365,511).

In the claim 9, Okazawa discloses the limitations of claim 4 above.

However, Okazawa is silent to disclosing an (N+1) bit cross-bar switch failure information register for storing whether failure has occurred or not with regard to first to (N+1) th cross-bar switches.

Kusano discloses an (N+1) bit cross-bar switch failure information register (control unit 55, see col. 3, lines 40-60) for storing whether failure has occurred or not with regard to first to (N+1) th cross-bar switches (35, 43, figure 6);

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A selection-circuit control output circuit for outputting a selection control signal to each of selection circuits based upon values in cross-bar switch failure information (73, 75, 85, 87, figure 6, col. 15, lines 8-14);

A multiple-failure detector for informing system controller (73, 75, 85, 87, figure 6, col. 15, lines 8-14) for informing a system controller (55) of occurrence of multiple failure when multiple cross-bar switches fail (see col. 15, lines 8-14).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Okazawa with the teaching of Kusano to provide cross-bar switch failure information register in order reliably transmit transmission signals.

5. In the claim 13, Okazawa et al. discloses cross-bar switches connect CPUs and memory within a computer (see col. 1, lines 12-17), or perform switching between nodes of a multiple system having CPUs and memories wherein the memories of remote nodes are access via the cross-bar switches (LSIs 31-37, figure 3, 4B, col. 5, lines 58-67, col. 6, lines 1-10).

Allowable Subject Matter

6. Claims 1-3, 5-8, 10-12, 14-17 are allowed.

7. The following is an examiner's statement of reasons for allowance: the prior art (6035414, 6226261, 5365511, 5459718, 6131169) of record does not appear to teach or render obvious the claimed limitations in combination with the specific added limitations, as recited from independent claims 1, 2, 3: "in response to a selection control signal output from a failure processing circuit that executes cross-bar switch failure processing, each of selection circuits selects

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and outputs one of its two inputs and when one cross-bar switch fails, takes the failed cross-bar switch out of service”.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chuong ho whose telephone number is (571)272-3133. The examiner can normally be reached on Monday-Friday from 8:00AM-4:00PM.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chuong Ho
Examiner
Art Unit 2664

09/06/04

A handwritten signature in black ink, appearing to be 'Chuong Ho', with a long horizontal flourish extending to the right.